REMARKS

1. The Amendments and the Support Therefor

No claims have been canceled, four new claims (21-24) have been added, and claims 1, 3-9, and 16 have been amended to leave claims 1-24 in the application. Payment for any newly-submitted claims in excess of the amount previously paid for should accompany this Response, as per 37 CFR §1.16(b)-(d), with the fee due being calculated as follows:

FEE CALCULATION

For	Already Paid	No. Extra	Rate (NOT Small Entity)	Fee (NOT Small Entity)
Total Claims	24 - 20 =	4	x $50 =	$200
Independent Claims	4 - 3 =	1	x $210 =	$210
			Total:	$410

No new matter has been added by the amendments or new claims, wherein the amendments to claims 1 and 3-9 are supported by Fig. 1 (wherein retaining means/loops 1 secures the central regions of the lengths of the bent cells); the amendments to claims 5, 8, and 16 are supported by page 4 lines 28-30; new claims 21, 22, and 24 are supported by Fig. 1; and claim 23 is supported by Fig. 1, and also by (for example) claim 16.

2. Sections 2-3 of the Office Action: Objections to Drawings

Kindly reconsider and withdraw the objection at Section 2 of the Office Action. The basis for this objection is unclear. Fig. 3 simply illustrates a single one of the cells of Figs. 1 and 2 (though with a preferred retaining means, i.e., anchor hook 20, being shown in Fig. 3 but not in Figs. 1-2); compare Figs. 1-3. The statement that "the specification provides support for the single layered cell but not for the stacked cells" seems to be in the nature of a new matter objection, but since all drawings were part of the original specification when filed, they cannot constitute new matter. Perhaps more detailed descriptions of the drawings at the "Brief Description of the Drawings" section, explaining the foregoing relationship between the drawings, would address any issues here?

Regarding the rejection at Section 3 of the Office Action, a substitute Fig. 3 is submitted with this Response.

3. Section 4 of the Office Action: Rejection of Claims 10-15 Under 35 USC 112(1)

Kindly reconsider and withdraw these rejections, as the claims are plainly enabled. See, e.g., page 3 line 25-page 5 line 2:

> FIG. 1 shows a plan view of a pad 10 comprising a bank of interleaving *linear cells 2* extending transversely of the pad 10. As shown in FIGS. 1 and 2, loop straps 1 hold the central section of the cells 2 linearly in parallel with the cell axis 11 whereas the opposite ends 3 of the cells 2 are secured a pre-determined distance 4 off-set from the cell axis 11. The distance 4 can vary along the length of the pad.
>
> ***By fixing of the ends 3 of the cells 2 at a distance 4 away from the cell axis, each end 3 of the cell 2 is pulled away from the centre axis of the cell, the loop straps 1 holding the central section of the cell become tensioned, preventing the central cell section from moving or rotating.*** . . . .
>
> In a preferred embodiment, each cell end 3 is fitted with a anchor shaped hook 20 which is inserted into a corresponding slot on the pad base 12. (See FIGS. 3 and 4.) The anchor hook 20 is rotated by 90 degrees to align the hook ends 21 with mating apertures 13 within the base 12. The hook ends 21 enter the apertures 13 and secure the cell end 3 to the pad base 12. The cells can be detached from the base 12 by reversing the above procedure.

(Emphasis added.) It is apparent from the foregoing, and from the associated drawings, that if the cells are unfastened at their ends (e.g., via anchor hooks 20 in FIGS. 3-4), the tensioned cells - which are tensioned into the bent shape of Figs. 1-2 (and in the solid-line depiction of Fig. 3) - will be released and the cells will assume a linear shape (as in new phantom depiction in revised Fig. 3 submitted with this Response). As noted in *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 94 (Fed. Cir. 1986):

> Enablement is a legal determination of whether a patent enables one skilled in the art to make and use the claimed invention, and is not precluded even if some experimentation is necessary, although the amount of experimentation needed must not be unduly extensive, and is determined as of the filing date of the patent application.... Furthermore, a patent need not teach, and preferably omits, what is well known in the art.

See also *Enzo Biochem Inc. v. Calgene Inc.*, 52 USPQ2d 1129, 1136 (Fed. Cir. 1999) ("[A]n enablement determination is made retrospectively, i.e., by looking back to the filing date of the patent application and determining whether undue experimentation would have been required to make and use the claimed invention at that time....") The enablement determination is, at least superficially, a simple one: regardless of the breadth of the disclosure, would one of ordinary skill

know how to make and use the invention as claimed? See, e.g., *Bayer AG v. Schein Pharmaceuticals Inc.*, 64 USPQ2d 1001, 1006 (Fed. Cir. 2002) ("Because an enabling disclosure by definition turns upon the objective understanding of a skilled artisan, the enablement requirement can be met by reference to the knowledge of one of ordinary skill in the relevant art"); *In re Wright*, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) ("Nothing more than objective enablement is required, and therefore it is irrelevant whether this teaching is provided through broad terminology or illustrative examples"). See also MPEP 2164 *et seq.* Here, one of ordinary skill would clearly be able to make and use the claimed invention after review of the specification and associated drawings. The claims are therefore enabled, and the rejections should be withdrawn.

4. Section 5 of the Office Action: Rejection of Claims 9-20 Under 35 USC 112(2)

Kindly reconsider and withdraw these objections as well. Since an ordinary artisan would comprehend the bounds of the claims when read in light of the specification, the claims meet the requirements of 35 USC §112(2). As noted by the Court of Appeals for the Federal Circuit in *Miles Laboratories Inc. v. Shandon Inc.*, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993):

> The "distinctly claiming" requirement [of 35 USC §112(2)] means that the claims must have a clear and definite meaning when construed in the light of the complete patent document. ... Section 112 thus ensures definiteness of claim language. ... The test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. ... If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more.

(Citations omitted.) See also *Howmedica Osteonics Corp. v. Tranquil Prospects Ltd.*, 74 USPQ2d 1680, 1683 (Fed. Cir. 2005) ("[t]he definiteness of a patent claim depends on whether one skilled in the art would understand the bounds of the claim when read in light of the specification"); MPEP 2173.02 ("Definiteness of claim language must be analyzed, not in a vacuum, but in light of . . . . [t]he content of the particular application disclosure . . . .").

Here, the rejection of claim 9 is phrased as an enablement rejection. As discussed in the foregoing Section 3 of this Response, the claims are plainly enabled. Otherwise, the meaning of

the claims is clear from a review of the specification (see, e.g., the passages in the foregoing Section 3 of this Response).

The rejection of claim 10 similarly seems to be stated as an enablement rejection, and enablement of claim 10 is addressed in the foregoing Section 3 of this Response. The meaning of claim 10 (and its dependent claims 11-15) is believed to be apparent from review of the specification, e.g., the passages in the foregoing Section 3 of this Response. As these passages make clear, tensioning need not depend on inflation / deflation. For example, in Fig. 2, if the ends 3 of the cells 2 are pulled in opposite directions and are fixed down by (for example) anchors 20 in Fig. 3, they will assume the (bent) tensioned shape regardless of whether they are inflated or deflated. (It is noted that the claim does not state that "the cells are always in tension," as the rejection implies.) If tension is released, the cells 2 will release to an untensioned shape (a straight, or at least straighter, shape). Since the meaning of claim 10 is clear in view of the specification, the rejection should be withdrawn.

Claim 16 has been amended for clarification, and claims 17-20 should by extension be clarified as well.

5. Section 7 of the Office Action: Rejection of Claims 1-8 under 35 USC §102 in view of U.S. Patent 6,349,439 to *Cook*

U.S. Patent 6,349,439 to *Cook* illustrates a pressure pad (as in FIG. 1) having sets of alternately inflatable cells 1 and 2 wherein each cell is retained atop a base sheet 3 (seen in FIG. 3) by loops 4 (FIG. 1); see column 2 lines 53-55. Several loops 20 at one end of the pad are elastic, whereby these loops exert radial force on their cells to accelerate deflation (column 2 lines 56-67). FIG. 2 illustrates an alternative embodiment wherein cells are encased in sleeves 10 which are in turn held by elastic loops 20 to attain the same effect (column 3 lines 6-17).

FIGS. 4 and 5A-5C of *Cook* then illustrate an arrangement for retraining the base sheet 3 (and thus the cells 1 and 2 above) to a bed, wherein securing straps (21 in FIG. 4, 21a in FIGS. 5A/5B, and 21c in FIG. 5C) extend from the edges of the base sheet 3 to a portion of the bed (shown unlabeled in FIGS. 5A-5C); see column 3 lines 41-57. The straps 21 include loops 21a

(FIGS. 5A/5B) or folds 21c (FIG. 5C) which expand to avoid tension on the straps 21 (and thus on the base sheet 3). When a patient lies on the cells of FIG. 5A, the edges of the pad may bend upwardly as seen in FIG. 5B as the center of the pad is pushed downwardly. In this case, the loops/folds 21a and 21c can open/unfold (as in FIGS. 5B-5C) to accommodate the bending of the pad without tearing the straps 20 off of the bed (see column 3 lines 53-57).

Kindly reconsider and withdraw the rejections of claim 1 and its dependent claims 2-8. Claim 1 recites that the cells are held in place on a pad base by retaining means which hold the lengths of the cells in tension across the pad. The *Cook* "retaining means" 4 and 20 do not tension the lengths of the cells; they merely loop around the cells to hold them to the pad base 3 (see column 2 lines 52-59 of *Cook*). The *Cook* straps 21 restrain the pad base 3 to the bed, and they do not tension the pad base 3 owing to the inclusion of the expansible sections 21a/21c, which expand to *avoid* tension (column 3 lines 52-57). Thus, the *Cook* structure does not anticipate claim 1. It is notable that *Cook* is a prior art pressure pad of the type discussed in Applicant's specification at page 1 line 18-page 2 line 3 and elsewhere, in that the inflation/deflation of the *Cook* cells tends to shift the patient across the pad's surface (particularly where the pad and patient are inclined, e.g., when the bed/platform upon which the pad is situated is inclined). See particularly page 4 lines 8-18 of Applicant's specification:

> [O]ne of the main reasons for the prior art alternating pads inducing downward movement of the user as the cells alternately inflate and deflate, is that with the cell ends anchored on a common linear axis with the loop straps, the loop straps are allowed to pivot about their anchor points and the cells to rotate under a user supported thereupon. These actions act in a similar manner to a conveyor belt. The rising cell supports the user, moves or rotates down the bed, deflates, rises again in its original position and the process continues over and over again.

Since the *Cook* cells are "unrestrained" atop the pad base 3 within their loops 4/20 (and/or sleeves 10), they allow this "conveyor" action, such that a patient (particularly an inclined patient) will move along the pad as the cells inflate/deflate. There is no apparent reason why it would occur to an ordinary artisan to solve this problem by restraining the cells to the base pad 3 in such a manner that the cells are tensioned as recited in Applicant's claim 1, as well as (or instead of) the cells simply being held about their circumferences.

Regarding claims 3 and 6, the *Cook* straps 4 and 20 do not secure the opposite ends of each cell at a predetermined distance from the center linear axis of the cell such that the lengths of the cells are bent. It is clear from the *Cook* drawings that the *Cook* straps 4 and 20 retain the lengths of the cells in a straight/linear form.

Regarding claims 5 and 8, column 3 lines 41-48 of *Cook* are cited as allegedly disclosing the recited fasteners. However, column 3 lines 41-48 of *Cook* discusses straps which hold the pad base 3 atop the bed, whereas the recited fasteners releasably retain each end of the cell to the pad base. *Cook* therefore does not disclose the recited arrangement.

6. Section 8 of the Office Action: Rejection of Claims 1-9 and 16-20 under 35 USC §103 in view of U.S. Patent 5,966,762 to *Wu* and U.S. Patent 6,349,439 to *Cook*

Before reviewing the rejections, a brief overview of *Wu* is useful. Referring to FIG. 1, the Wu reference shows a mattress having a number of inflatable cells 1 within an envelope 2 (column 2 lines 7-19), with the inflatable cells 1 being held on/in the envelope 2 via buttons and sockets 11 (FIGS. 6-7) which engage the opposing ends of the cells 1 to the envelope 2, and fastening belts / straps 12 (FIGS. 1, 6-7) which extend from the base 20 of the envelope 2 about the circumferences of the cells 1 (column 2 lines 19-27). Inflatable "body turning means" 5 (inflatable cells 50, 50a, 50b, FIGS. 1 and 6-8) -- in essence, inflatable cells extending across the length of the underside of the mattress, and situated at the opposing transverse sides of the underside of the mattress -- can be inflated as shown in FIGS. 7-8 to turn a patient from side to side (column 2 line 64-column 5 line 25). Similar "leg bending means" 4 (inflatable cells 40, 40a, 40b, FIGS. 1 and 3-5) and "head lifting means" 6 (inflatable cells 60, 61, 62, FIGS. 9-10) -- inflatable cells extending across the width of the underside of the mattress, and arrayed across portions of the length of the underside of the mattress -- can be inflated to lift the patient's legs and/or head (column 2 lines 33-60, column 3 lines 26-38).

Regarding claim 1, neither of *Wu*'s "retaining means" 11 and 12 hold the lengths of the cells in tension across the pad. The buttons 11 simply retain the envelope 2 (the mattress cover) on the cells in non-slip fashion, and it is not seen how any tension is exerted across any portion

of the lengths of the cells. *Cook* does not remedy this deficiency of *Wu*, and there is nothing in *Cook* nor *Wu*, considered individually or collectively, that shows or suggests tensioning the lengths of the cells.

Regarding claims 3, 6, and 9 *Wu*'s "retaining means" 11 and 12 don't hold the cells in a bent form. When the lengths of the cells are bent (as shown in FIGS. 7-8 of *Wu*), they are urged into this shape by the inflatable cell 50, not by any action of *Wu*'s "retaining means" 11 and 12. *Cook* does not show or suggest cells bent along their lengths.

Regarding claim 16, the loops 12 and fasteners 11 of *Wu* do not urge the cells into nonlinear shapes between the loops and fasteners. Initially, as noted above, *Wu*'s loops 12 and fasteners 11 do not urge the cells at all – the "body turning means" (inflatable cell 50) urges the cells, whereas *Wu*'s loops 12 and fasteners 11 simply keep the cells in a side-to-side array, and retain the envelope 2 (the mattress cover) on the cells. Further, the *Wu* cells are not nonlinear *between their loops and fasteners*; as seen best in FIG. 7 of *Wu*, the cells remain straight/unbent between the loops 12 and fasteners 11 Turning to *Cook*, this reference simply does not show or suggest cells in nonlinear shapes, and thus does not remedy the deficiencies of *Wu*.

Regarding claims 17 and 20, *Wu* does not tension the cells along any portion of the lengths of the cells. If it is believed that the fasteners 11 somehow place the lengths of the cells in tension, kindly explain how this is so.

7. Claim 10; New Claims 21-24

Claim 10 is believed allowable over *Cook* and *Wu*. *Cook* does not tension the cells into a tensioned shape which changes when tension is released. As for *Wu*, even if it is assumed that fasteners 11 "tension" the cells of *Wu*, it is not seen how the cells will assume different shapes when tensioned (fastened) and untensioned (unfastened).

New claims 21 and 22, which ultimately depend from claim 1, are submitted to be allowable for at least the same reasons as claim 1. Additionally, claims 21 and 22 are submitted to be independently allowable because neither *Cook* nor *Wu* show interfit bent cells.

New claim 23 is submitted to be allowable because neither *Cook* nor *Wu* show or suggest cells restrained near their middles and ends, with the cells being bent between the restraints.

New claim 24 is submitted to be allowable because neither *Cook* nor *Wu* show interfit bent cells.

8. In Closing

If any questions regarding the application arise, please contact the undersigned attorney. Telephone calls related to this application are welcomed and encouraged. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

ATTACHMENTS:
- Replacement Sheet (FIGS. 3-4)

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